

REMARKS/ARGUMENTS

Claims 1 and 19-31 are pending. Claims 2-17 have been withdrawn from consideration by the Examiner. Applicants maintain their traversal of the Restriction Requirement set forth in the Reply to Election/Restriction Requirement filed July 6, 2009. By this Amendment, the Abstract, the specification, and claims 1 and 19-26 are amended, claims 27-31 are added, and claims 2-18 are canceled without prejudice or disclaimer. No new matter is added. Merely to expedite prosecution of the application, non-elected claims 2-17 have been canceled to be pursued in a Continuation/Divisional application. Support for the claims can be found throughout the specification, including the original claims, and the drawings. Reconsideration in view of the above amendments and following remarks is respectfully requested.

The Examiner is thanked for indication that claims 19-21 and 23-26 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. §112, 2nd paragraph, set forth in the Office Action and to include all of the features of the base claim and any intervening claims. Claims 23 and 26 have been amended to obviate the rejection under 35 U.S.C. §112, 2nd paragraph. However, for the reasons set forth below, claims 19-21 and 23-26 have not been rewritten in independent form at this time.

The Office Action objected to the specification. The objection is respectfully traversed.

On pages 2-3 of the Office Action, the Examiner stated that:

“Page 15[,] line[s] 6-9 [state] ‘as a force that pushes up the piston 340...is provided to the fourth elastic member 450, the fourth...as well as the first member 460 bend, and relative to this, the upward moving speed of the piston

part 340 is delayed'; and line[s] 12-14 [state] 'the connecting rod 330 does not bend at a top dead center, and...the fourth 450 [and] the fifth [460] elastic member [] bend little by little in the re-expansion, to provide a force that make the piston 340 to move down at a fast speed.' The [E]xaminer understands the first part, since the force of the crankshaft on one side of the connecting rod is balanced by the force of compressing the gas acting on the other side of the connecting rod, and the rod bends. The [E]xaminer [does] not understand the second part, since there is no force acting on the connecting rod to cause it to bend. If anything, there is a force acting to keep it straight, since the force of the crankshaft and the inertia of the piston act to stretch the connecting rod [out], keeping it straight. Therefore, it would appear that the connecting rod of the embodiment of [F]ig[s.] 9A-9C would work to allow the speed of the piston to be delayed, but would not allow the speed of the piston to be accelerated."

However, referring to Fig. 9C, as the eccentric part 320 of the crank shaft 310 moves up, the piston 340 is forced to move up in the cylinder block 350 and compresses the refrigerant. Since the force of the crank shaft 310 is balanced by the force on the piston 340 compressing the refrigerant, the fourth elastic member 450 as well as the fifth elastic member 460 bend and relative to this, an upward moving speed of the piston 340 is delayed. See, for example, Fig 9A and page 15, lines 6-11 of the specification. At a top dead center, a center of the crank shaft 310, the eccentric part 320, the first and second holders 331b and 332b, the fourth and fifth elastic members 450 and 460, and the piston 340, are all aligned. Hence, the fourth and fifth elastic members 450 and 460 do not bend and the fourth elastic member 450 is compressed. It is respectfully submitted that as the eccentric part 320 moves away from the top dead center downward, the fourth elastic member 450 as well as the fifth elastic member 460 bend as the fourth elastic member 450 is restored and provides a force that makes the piston 340 move down at a faster speed in the re-expansion. See, for example, Fig 9B and page 15, lines 12-15 of

the specification. The paragraph at page 15, lines 12-15 has been amended to correct informalities and/or improve its clarity. Accordingly, this objection should be withdrawn.

The Office Action objected to Fig. 9C for informalities under 37 C.F.R. §1.121 (d). The objection is respectfully traversed. As set forth above with respect to the specification, the fourth and fifth elastic member should be shown as bent, instead of straight, and thus, no amendments to Fig. 9C are required. Accordingly, the objection should be withdrawn.

The Examiner rejected claims 1 and 18-26 under 35 U.S.C. 112, second paragraph, as allegedly being indefinite. As noted above, claim 18 has been cancelled. By this Amendment, each of the Examiner's comments has been addressed in amending the claims. Hence, withdrawal of this rejection is respectfully requested.

The Office Action rejected claim 1 under 35 U.S.C. §102(b) as being anticipated by An et al. (hereinafter "An"), Korean Patent No. KR 2002-20549 and U.S. Patent No. 6,595,105. The rejection is respectfully traversed.

Independent claim 1 has been amended to include the features of dependent claim 18, and claim 18 has been canceled. Independent claim 1 recites, *inter alia*, a supplementary torque providing part, wherein compression, extension, and restoration of the supplementary torque providing part are made along a direction of movement of the piston, wherein the connecting rod includes a first connecting part connected to the piston and a second connecting part connected to the eccentric part at the crank shaft, and wherein the supplementary torque providing part includes a first elastic member provided between the first connecting part and the

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second connecting part, and having opposite ends connected to the first connecting part and the second connecting part, respectively, to form an outer circumferential surface, and a second elastic member fitted inside of the first elastic member. An does not disclose or suggest at least such features of independent claim 1, or the claimed combination. Accordingly, the rejection of independent claim 1 over An should be withdrawn.

The Office Action rejected claims 1, 18, and 22 under 35 U.S.C. §102(b) as being anticipated by or, in the alternative, under 35 U.S.C. 103 as obvious over Albarda, U.S. Patent No. 4,527,463. Claim 18 has been canceled, and its features added to independent claim 1. The rejection is respectfully traversed insofar as it applies to claims 1 and 22.

Independent claim 1 recites, *inter alia*, a supplementary torque providing part, wherein compression, extension, and restoration of the supplementary torque providing part are made along a direction of movement of the piston, wherein the connecting rod includes a first connecting part connected to the piston and a second connecting part connected to the eccentric part at the crank shaft, and wherein the supplementary torque providing part includes a first elastic member provided between the first connecting part and the second connecting part, and having opposite ends connected to the first connecting part and the second connecting part respectively, to form an outer circumferential surface, and a second elastic member fitted inside of the first elastic member. Albarda does not disclose or suggest at least such features of independent claim 1, or the claimed combination.

Rather, Albarda discloses an elastic length equalizer 12 that includes a connecting rod 7

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having a tube 14 connected to a crank 6. The tube 14 is guided in a sleeve 15 connected to a piston 5 via a pivot 17. Albarda merely discloses that an outer compression spring 23 is provided between the sleeve 15 and the tube 14 and an inner spring 24 is provided in the tube 14. It is respectfully submitted that the outer compression spring 23 merely surrounds the tube 14 and is not connected to the tube 14. Further, the inner spring 24 is provided inside of the tube 14, not inside the outer compression spring 23. See, for example, Fig. 2 and column 3, line 51-column 4, line 9 of Albarda. Thus, Albarda at least fails to disclose or suggest a first elastic member provided between the first connecting part and the second connecting part, and having opposite ends connected to the first connecting part and the second connecting part, respectively, to form an outer circumferential surface, and a second elastic member fitted inside of the first elastic member.

Accordingly, the rejection of independent claim 1 over Albarda should be withdrawn. Dependent claim 22 is allowable over Albarda at least for the reasons discussed above with respect to independent claim 1, from which it depends, as well as for its added features.

The Office Action rejected claim 1 under 35 U.S.C. §102(b) as being anticipated by or, in the alternative, under 35 U.S.C. 103 as obvious over either Friedman et al. (hereinafter "Friedman"), U.S. Patent No. 3,659,502, German Patent No. DE 2734447 ("hereinafter "DE '447"), or WIPO Patent Publication No. WO 00-08325 (hereinafter "WO '325"). The rejection is respectfully traversed.

Independent claim 1 has been amended to include the features of depend claim 18, and claim 18 has been canceled. Independent claim 1 recites, *inter alia*, a supplementary torque providing part, wherein compression, extension, and restoration of the supplementary torque providing part are made along a direction of movement of the piston, wherein the connecting rod includes a first connecting part connected to the piston and a second connecting part connected to the eccentric part at the crank shaft, and wherein the supplementary torque providing part includes a first elastic member provided between the first connecting part and the second connecting part, and having opposite ends connected to the first connecting part and the second connecting part respectively, to form an outer circumferential surface, and a second elastic member fitted inside of the first elastic member. Friedman, DE '447, and WO '325 do not disclose or suggest such features of independent claim 1, or the claimed combination. Accordingly, the rejection of independent claim 1 over Friedman, DE '447, or WO '325 should be withdrawn.

By this Amendment, claims 27-31 have been added. It is respectfully submitted that claims 27-31 are allowable over the applied prior art in view of their ultimate dependency on independent claim 1, as well as for their added features.

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CONCLUSION

In view of the foregoing amendments and remarks, it is respectfully submitted that the application is in condition for allowance. Favorable consideration and prompt allowance are earnestly solicited.

If the Examiner believes that any additional changes would place the application in better condition for allowance, the Examiner is invited to contact the undersigned attorney at the telephone number listed below.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this, concurrent and future replies, including extension of time fees, to Deposit Account 16-0607 and please credit any excess fees to such deposit account.

Respectfully submitted,
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